

In the Claims

Claims pending:

- Previous to these Amendments: 1-8, 10-25, 27-34, 36-39, and 41-47
- After these amendments: 1-8, 10-25, 27-34, 36-39, and 41-47

5 **Currently Amended claims:** 2, 7, 8, 13, 17, 19, 21-23, 28, 30, 32-34, 36, and 43-47

Canceled or Withdrawn claims: None.

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This listing of the claims replaces all previous versions and listings:

1. (Previously Presented) A computer-readable medium having computer-executable instructions for performing a method of rendering a web page image, the method comprising:

- receiving an HTML document having an element thereon, the HTML
- 5 document including information associating the element with an external component that is encapsulated and external to the HTML document such that multiple instances of the external component are used with a plurality of different HTML documents including the HTML document having the element thereon and wherein the information associating the element with the external component is
- 10 maintained in a cascading style sheet;

rendering a page image corresponding to at least part of the HTML document, the page image including a representation of the element and the page image being rendered by a renderer configured to:

- modify the page image by accessing one or more extensible markup
- 15 language (XML) namespaces specified by the external component to initiate drawing of information on the page image based at least in part on code included in the one or more XML namespaces;

- make a plurality of calls to the one or more XML namespaces to initiate the drawing of the information on the page image; and

- 20 draw the information on the page image responsive to one or more of the plurality of calls to the one or more XML namespaces;
- instantiating the external component to reveal one or more of the XML namespaces specified by the external component, the one or more of the XML namespaces being external to the HTML document and specifying one or more behaviors to be applied to the element; and

accessing the one or more XML namespaces to retrieve a new behavior to be applied to the representation of the element rendered on the page image, the new behavior being configured to enhance a default behavior for the element.

2. (Currently Amended) The computer-readable medium of claim 1 further comprising, receiving an event, and wherein instantiating the external component is in response to receiving the event.

5 3. (Previously Presented) The computer-readable medium of claim 1 further comprising, modifying an appearance of the representation of the element in response to accessing the one or more of the XML namespaces.

10 4. (Previously Presented) The computer-readable medium of claim 1 further comprising, changing a location of the representation of the element in response to accessing the one or more of the XML namespaces.

15 5. (Previously Presented) The computer-readable medium of claim 1 further comprising, drawing information on the page image in response to accessing the one or more of the XML namespaces.

6. (Original) The computer-readable medium of claim 1 wherein the external component comprises an object, and wherein accessing the external component includes instantiating an instance of the object.

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7. (Currently Amended) The computer-readable medium of claim 1 further comprising, receiving a new HTML document having another element thereon, the new HTML document including information associating the another element with the external component, rendering a new page image corresponding to at least part of the HTML document, the new page image including a representation of the another element, and accessing the one or more of the XML namespaces for determining a behavior of the representation of the another element rendered on the new page image.

8. (Currently Amended) The computer-readable medium of claim 7 wherein the external component comprises a component object model (COM) object, and wherein instantiating the external component for determining a behavior of the representation of the another element includes instantiating another 5 instance of the object.

9. (Canceled)

10. (Original) The computer-readable medium of claim 1 wherein the 10 information associating the element with the external component is maintained in a custom tag.

11. (Original) The computer-readable medium of claim 1 wherein the 15 information associating the element with the external component is maintained in a class.

12. (Original) The computer-readable medium of claim 1 wherein the information associating the element with the external component is maintained in the document inline with the element.

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13. (Currently Amended) The computer-readable medium of claim 1 wherein the HTML document includes another element having a representation thereof rendered in the page image, the HTML document includes other information associating the another element with the external component, and 25 further comprising, accessing the external component for determining a behavior of the representation of the another element.

14. (Previously Presented) The computer-readable medium of claim 1 wherein the HTML document includes information associating the element with a second external component, and further comprising, accessing the second external component for determining a second behavior of the representation of the element.

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15. (Previously Presented) The computer-readable medium of claim 14 further comprising, resolving a conflict between the behavior determined by the one or more XML namespaces and the second behavior determined by the second external component based on the order in which the behaviors were applied to the 10 element with each subsequent behavior taking precedence over a previous behavior.

16. (Original) The computer-readable medium of claim 1 further comprising, downloading the external component.

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17. (Currently Amended) A computer-implemented method of providing dynamic effects to an HTML document, comprising,

encapsulating code in an external component that affects a behavior of one or more elements contained in the HTML document while being external to the

5 HTML document, including elements of different HTML documents, wherein code for determining a behavior of the one or more elements contained in the HTML document is not included in the HTML document and is defined by one or more extensible markup language (XML) namespaces associated with the external component;

10 inserting an element into the HTML document;

attaching a reference in the HTML document to associate the element with an instance of the external component, such that another instance of the element is referenced by a different HTML document, and wherein the reference associating the element with the external component is maintained in a cascading style sheet

15 and comprises a reference to the one or more XML namespaces; and

providing the HTML document to a renderer, wherein the renderer is capable of instantiating the external component, the renderer being configured to:

modify [[the]] a page image by accessing the one or more extensible markup language [(]X_{ML}[(])] namespaces specified by associated with

20 the external component to initiate drawing of information on the page image based at least in part on code included in the one or more XML namespaces;

make a plurality of calls to the one or more XML namespaces to initiate the drawing of the information on the page image;

25 draw the information on the page image responsive to one or more of the plurality of calls to the one or more XML namespaces;

instantiate the external component to reveal one or more of the XML namespaces specified by associated with the external component, the one or

more of the XML namespaces being external to the HTML document and specifying one or more behaviors to be applied to the element; and

access the one or more XML namespaces to retrieve a new behavior to be applied to [[the]] a representation of the element rendered on the page image, the new behavior being configured to enhance a default behavior for the element.

5 18. (Original) The method of claim 17 further comprising, providing the external component to the renderer.

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19. (Currently Amended) The method of claim 17 further comprising, rendering the page image from the HTML document, accessing the one or more XML namespaces, and modifying [[a]] the representation of the element based on the code in the one or more XML namespaces.

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20. (Previously Presented) The method of claim 19 wherein the external component is a component object model (COM) object, and wherein accessing the one or more XML namespaces includes calling an interface of the COM object.

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21. (Currently Amended) The method of claim 19 wherein modifying [[a]] the representation of the element includes changing the appearance thereof.

22. (Currently Amended) The method of claim 19 wherein modifying [[a]] the representation of the element includes changing the location thereof.

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23. (Currently Amended) The method of claim 17 further comprising, rendering the page image from the HTML document, accessing the one or more XML namespaces, and drawing information in the page image based on the code in the one or more XML namespaces.

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24. (Previously Presented) The method of claim 23 wherein rendering the page image from the HTML document is interleaved with drawing information in the page image.

10 25. (Previously Presented) The method of claim 17 further comprising receiving an event indicative of user interaction with the page image.

26. (Canceled)

15 27. (Previously Presented) The method of claim 17 wherein the reference associating the element with the external component is maintained in a custom tag.

20 28. (Currently Amended) The method of claim 17 wherein the reference information associating the element with the external component is maintained in a class identifier.

25 29. (Previously Presented) The method of claim 17 wherein the reference associating the element with the external component is maintained inline with the element in the HTML document.

30. (Currently Amended) A computer system including at least one processor for rendering page images on a display, comprising:

- an external component encapsulating code for modifying a behavior of one or more elements, the external component operable to be instantiated multiple times and operable to modify elements in a plurality of different HTML documents while being external to the HTML documents and wherein [[the]] information associating the one or more elements with the external component is maintained in a cascading style sheet, wherein code for determining a behavior of the one or more elements is included in one or more extensible markup language (XML) namespaces that are defined externally to the HTML documents and that are associated with the external component; and

at least one processing unit comprising a renderer connected to the display for rendering the page images, the renderer being configured to:

- 15 modify one or more of the page images by accessing one or more of the XML namespaces associated with the external component to initiate drawing of information on the one or more of the page images based at least in part on code included in the one or more XML namespaces;
- make a plurality of calls to the one or more XML namespaces to initiate the drawing of the information on the one or more of the page images; and
- 20 draw the information on the one or more of the page images responsive to one or more of the plurality of calls to the one or more XML namespaces;

the renderer being further configured to:

- 25 instantiate the external component to reveal one or more of the XML namespaces associated with specified by the external component, the one or more of the XML namespaces being external to the HTML document and specifying one or more behaviors to be applied to the one or more elements; and

access the one or more XML namespaces to retrieve a new behavior to be applied to the representation of the one or more elements rendered on the page image, the new behavior being configured to enhance a default behavior for the one or more elements.

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31. (Original) The system of claim 30 further comprising a mechanism for receiving an event.

32. (Currently Amended) The system of claim 30 wherein the renderer
10 is configured to display a representation of the one or more elements and modify a behavior of the element by accessing the one or more XML namespaces.

33. (Currently Amended) The system of claim 32 wherein the behavior
is modified by changing a displayed property of the representation of the one or
15 more elements.

34. (Currently Amended) The system of claim 32 wherein the behavior
is modified by changing a displayed location of the representation of the one or
more elements.

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35. (Cancelled)

36. (Currently Amended) The system of claim 30 wherein the renderer is configured to call the external component a plurality of times to draw information on the one or more of the page images, and the renderer is configured to draw information on the one or more of the page images between at least some 5 of calls to the external component.

37. (Previously Presented) The system of claim 30 wherein the external component comprises an object, and wherein the renderer is configured to instantiate an instance of the object.

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38. (Previously Presented) The system of claim 30 wherein the external component comprises an object, and wherein the renderer is configured to communicate with the object through an interface.

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39. (Previously Presented) The system of claim 30 wherein the renderer is configured to receive a new HTML document having another element thereon that references the external component.

40. (Canceled)

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41. (Previously Presented) The system of claim 30 wherein the cascading style sheet is embedded in the HTML document.

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42. (Previously Presented) The system of claim 30 wherein the cascading style sheet is linked to the HTML document.

43. (Currently Amended) The system of claim 30 including a custom tag for associating the one or more elements with the external component.

44. (Currently Amended) The system of claim 30 wherein the information associating the one or more elements with the external component is maintained in the HTML document inline with the one or more elements.

5 45. (Currently Amended) The system of claim 30 wherein the HTML document includes another element and information associating the another element with the external component, and wherein the renderer is configured to access the one or more XML namespaces for determining a behavior of a [[the]] representation of the another element.

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46. (Currently Amended) The system of claim 30 wherein the document includes information associating the one or more elements with a second external component.

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47. (Currently Amended) The system of claim 30 wherein the renderer is configured to access the external component to control [[the]] a format of data input by a user.